

Application No. 09/975,873
Amendment dated August 5, 2003
Reply to Office Action dated May 5, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A medical device delivery system for therapeutically treating a patient, comprising:

an inner shaft, having proximal and distal ends;

a tubular outer sheath, at least a portion of which surrounds a portion of the inner shaft member;

a medical device within the outer sheath in an initial configuration;

a handle operatively coupled with the inner shaft and the outer sheath;

the handle having a first and second independently moveable actuator for adjusting the relative longitudinal positions of the inner shaft and the outer sheath, each of the first and second actuators providing a different amount of mechanical advantage between an input to one of the first and second actuators by a physician and a resulting relative longitudinal position of the inner shaft and the outer sheath respectively.

Claim 2 (original): The medical device delivery system of claim 1, wherein one of the first and second actuators provides a mechanical advantage of 1:1.

Claim 3 (original): The medical device delivery system of claim 1, wherein the first actuator is adapted to rotate around a threaded base.

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A2 the first means being adapted for precise and sensitive adjustment of the position of the outer shaft member, and the second means being adapted for rapid and relatively large-scale movement of the outer shaft member.

Claim 9 (new): The medical device delivery system of claim 1, further comprising a limit element limiting the extent of travel for the second actuator.

Claim 10 (new): The medical device delivery system of claim 9, wherein the limit element resists relative rotation between the inner shaft member and the tubular outer sheath.

A3 Claim 11 (new): A medical device delivery system for therapeutically treating a patient, comprising:

an inner shaft, having proximal and distal ends;
a tubular outer sheath, at least a portion of which surrounds a portion of the inner shaft member;

a medical device within the outer sheath in an initial configuration;
a handle operatively coupled with the inner shaft and the outer sheath;
the handle having a first and second independently moveable actuator for adjusting the relative longitudinal positions of the inner shaft and the outer sheath, each of the first and second actuators providing a different amount of mechanical advantage between an input to one of the first and second actuators by a physician and a resulting relative longitudinal position of the inner shaft and the outer sheath respectively;

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Claim 4 (original): The medical device delivery system of claim 1, wherein the second actuator is adapted to slide along a longitudinal slot defined by the handle.

Claim 5 (original): The medical device delivery system of claim 1, wherein one of the first and second actuators is formed as a lever.

Claim 6 (original): The medical device delivery system of claim 1, wherein the first actuator provides a mechanical advantage greater than 1:1, to facilitate an operator to overcome initial resistance to changing the initial relative position of the inner shaft and the outer sheath.

Claim 7 (original): The medical device delivery system of claim 1, wherein the handle and the first and second actuators can be operated by one hand.

Claim 8 (currently amended): A handle for manipulating a medical device delivery system for therapeutically treating a patient; comprising:

a housing;

inner and outer shaft members;

the inner shaft member being affixed to the housing;

the outer shaft member being movably coupled to the inner shaft member, such that the outer shaft member can be moved longitudinally with respect to the inner shaft member;

first and second independent means for selectively moving the outer shaft member with respect to the inner shaft member;

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a limit element limiting the extent of travel for the second actuator, wherein the limit element resists relative rotation between the inner shaft member and the tubular outer sheath.

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